United States Department of Agriculture
Forest Service
Northeastern Area State & Private Forestry
180 Canfield Street Morgantown, WV 26505-3101

3420 Detection (NA-04-22)

Date: October 15, 2004

Subject: 2004 Aerial Sketchmapping Survey

To: Clyde Thompson, Forest Supervisor
Monongahela National Forest

On June 28 and 30, 2004, Rodney Whiteman and Martin MacKenzie of the Forest Health Protection (FHP) staff in Morgantown, along with Tim Sherm and Cameron Crisp, conducted an aerial sketchmapping survey of the Monongahela National Forest (MNF). The accompanying maps show the general locations and types of damage observed during these flights.

Summary

This year, no gypsy moth defoliation was observed within the MNF boundaries. Mortality and discoloration of American beech was mapped on 1,241 acres. Native defoliators and flooding damage were mapped on 512 acres. Unknown light, scattered mortality was mapped on 4,723 acres with the most likely cause being beech bark disease and hemlock woolly adelgid.

Survey Results

This year, beech mortality and discoloration, native defoliators, and flooding damage were observed within the MNF boundaries. The following table shows the number of acres sketchmapped for each type of damage by district.

2004 Sketchmapped Damage (Acres)

District	Beech Bark Disease	Defoliators	Flooding	Unknown Mortality*	Total
Cheat	0	0	0	121	121
Gauley	345	0	0	367	712
Greenbrier	88	15	304	894	1,301
Marlinton	768	193	0	3,020	3,981
Potomac	40	0	0	252	292
White Sulphur Springs	0	0	0	69	69
Total	1,241	208	304	4,723	6,476

* Unknown damage includes light, scattered conifer and hardwood mortality

Beech Bark Disease

American beech mortality and discoloration was mapped on 1,241 acres (Figures 1 and 2). Ground truthing of these areas revealed that a complex of agents caused this mortality, including classic beech

bark disease (BBD). Other factors, such as drought, defoliation, frost, and ambrosial beetles, have also

Figure 1. Light American beech mortality and discoloration.

Figure 2. Heavy American beech mortality and discoloration.

played a role. Classic BBD is caused by a combination of native fungi and an introduced insect. BBD results from the interaction between the introduced beech scale insect *Cryptococcus fagisuga* Lind. and the fungus *Nectria coccinea var. faginata* Lohman or *N. galligena* Bres. This complex can cause significant bole cankering and mortality in American beech, *Fagus grandifolia* (Ehrh.).

Unknown Damage and Native Defoliators

Unknown light, scattered mortality was mapped on 4,723 acres with the most likely cause being beech bark disease and hemlock woolly adelgid. FHP is planning on visiting these sites in the near future to determine the extent and exact cause of this damage.

District Rangers and other field-going personnel have the primary responsibility for on-the-ground, initial detection of insect and/or disease outbreaks. We ask that all field personnel continue to monitor for evidence of insect activity (such as an unusually high number of moths present in the forest in early spring, which may be a prelude to a defoliation event by native defoliators), defoliation, discoloration, and mortality in their areas and report any insect and disease activity to the Morgantown Field Office.

I personally would also like to extend my appreciation to Tim and Cameron for their valuable assistance in this survey. If you or any of your staff have any questions or comments regarding this survey, please contact Rick Turcotte at (304) 285-1544.

Sincerely,

JOHN W. HAZEL
Field Representative
Morgantown Field Office

Enclosures
Cc: District Ranger, Cheat RD w/enclosures
District Ranger, Gauley RD w/enclosures
District Ranger, Greenbrier RD w/enclosures
District Ranger, Marlinton & White Sulphur Springs RD w/enclosures
District Ranger, Potomac RD w/enclosures

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